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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/539,726 | 07/19/2006 | Sergey Amontov | CH920020037US1 | 8613 |
| 48062 7590 04/09/2010 RYAN, MASON & LEWIS, LLP 1300 POST ROAD SUITE 205 FAIRFIELD, CT 06824 | | | | |
| EXAMINER BERTAGNA, ANGELA MARIE | | | | |
| ART UNIT | | PAPER NUMBER | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action **Before the Filing of an Appeal Brief**

| | |
|---------------------------------------|---------------------------------------|
| Application No. 10/539,726 | Applicant(s) AMONTOV ET AL. |
| Examiner Angela M. Bertagna | Art Unit 1637 |

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 22 March 2010 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:

- a) ☐ The period for reply expires _____ months from the mailing date of the final rejection.
b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.
Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
(a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
(b) ☐ They raise the issue of new matter (see NOTE below);
(c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
(d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).

4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
The status of the claim(s) is (or will be) as follows:
Claim(s) allowed: _____.
Claim(s) objected to: _____.
Claim(s) rejected: _____.
Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because:
See Continuation Sheet.
12. ☒ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s): 3/22/2010
13. ☐ Other: _____.

/Kenneth R Horlick/
Primary Examiner, Art Unit 1637

Continuation of 11. does NOT place the application in condition for allowance because: Applicant's arguments filed on March 22, 2010 have been fully considered, but they were not persuasive.

Regarding the rejection of claims 1, 4-7, 9, 10, 14, 17, and 20-22 under 35 U.S.C. 102(b) as being anticipated by Church, Applicant first argues that, in response to the Office Action mailed on February 4, 2009, independent claim 1 was amended to recite "self-completing amplification of the seed molecules via an amplifying reaction to produce the monolayer on a flat surface, wherein self-completing amplification of the seed molecules via an amplifying reaction to produce the monolayer comprises producing a homogeneous area, wherein the homogeneous area comprises a monolayer of molecules on the surface, and wherein the monolayer of molecules on the surface has no diffusive component that can relocate and destroy amplification accuracy", and that, in view of this amendment, the rejection made under 35 U.S.C. 102(b) citing Church was withdrawn in the Office Action mailed on July 8, 2009 as being obviated by the amendment (pages 6-7). Applicant then states that, in response to the Office Action mailed on July 8, 2009, nearly identical language was presented in independent claim 1, which was then rejected over Church in the Office Action mailed on January 21, 2010 (page 7). Applicant submits that the withdrawal and subsequent reapplication of the Church reference is improper (page 7).

Applicant's arguments with respect to the withdrawal and reapplication of the Church reference have been fully considered, but they were not persuasive. As discussed in the Office Action mailed on July 8, 2009, the amendment to independent claim 1 on April 6, 2009 to exclude the presence of any diffusive component that can relocate and destroy amplification accuracy resulted in a new matter issue, because the aforementioned language excludes the presence of any diffusive component that can relocate and destroy amplification accuracy, whereas the original disclosure only provides adequate support for seed molecules that cannot relocate and destroy amplification accuracy. Since Church does not exclude the presence of any diffusive component that can relocate and destroy amplification accuracy, the rejection made previously under 35 U.S.C. 102(b) was properly withdrawn in view of the amendment in the Office Action mailed on July 8, 2009. However, upon modification of the language in independent claim 1 to clarify that only diffusive seed molecules were excluded, the Church reference was again applicable as prior art under 102(b) in a rejection necessitated by amendment. Thus, although the version of claim 1 filed on October 8, 2009 is very similar to that filed on April 6, 2009, the scope of the two claims is not identical, but rather, differs such that Church is only applicable as prior art over the version of the claim filed on October 8, 2009.

Applicant also argues that Church does not teach the requirement for "self-completing amplification of the seed molecules via an amplifying reaction to produce a monolayer on a flat surface, wherein the amplifying process comprises production of a homogeneous area that comprises a monolayer of molecules on the flat surface that has no diffusive seed molecule component that can relocate and destroy amplification accuracy" as required by independent claim 1 (see pages 7-9). Applicant also argues that Church does not anticipate the methods of dependent claims 6, 7, 9, and 10, because "there are many orders of magnitude between a metal and a long molecule" (see page 10).

Applicant's arguments filed on March 22, 2010 regarding the teachings of Church have been fully considered, but they were not persuasive. With respect to independent claim 1, as discussed in the rejection, the method taught by Church comprises a self-completing amplification step that falls within the scope of independent claim 1. More specifically, as discussed previously, the replica transfer and amplification steps taught by Church at columns 8-15 produce a homogeneous monolayer of nucleic acid molecules having the same length that are attached to a flat surface. The teachings of Church at columns 9 and 15, in contrast to Applicant's arguments, indicate that the seed molecules transferred in the method of Church cannot relocate and destroy amplification accuracy, since each different seed molecule is confined to a particular area of the flat surface. It is noted that the claimed methods are not limited to covalently attached seed molecules as Applicant argues in the response, but only require that the seed molecules cannot undergo diffusion in manner that results in compromised amplification accuracy. This is the case in the methods of Church (see columns 9 and 15). It is also noted that the flat surface recited in claim 1 does not appear to possess the structural features described by Applicant at page 9 of the response, and therefore, the surfaces described by Church are not excluded as argued by Applicant. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

With respect to dependent claims 6, 7, 9, and 10, it is noted that the claims only require that the amplification process results in the formation of conductive structures and do not require the presence of a metal as Applicant's arguments at page 10 seem to imply. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). As discussed in the rejection, the amplified nucleic acid molecules produced in the method of Church are inherently conductive structures, since nucleic acids are conductive molecules. Therefore, the method of Church produces conductive structures as required by the dependent claims.

Since Applicant's arguments were not persuasive, the rejection of claims 1, 4-7, 9, 10, 14, 17, and 20-22 under 35 U.S.C. 102(b) as being anticipated by Church has been maintained.

Regarding the rejection of claim 8 under 35 U.S.C. 103(a) as being unpatentable over Church in view of Richter, Applicant first argues that Richter does not remedy the deficiencies of Church with respect to independent claim 1, from which claim 8 depends (see pages 10-11). Applicant also argues that there is insufficient motivation to combine Richter with Church, since metallization of nucleic acids cannot occur in the gels disclosed by Richter (page 10).

Applicant's first argument was not persuasive, because, as

discussed above, Church teaches all of the elements of claims 1, 4-
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7, 9, 10, 14, 17, and 20-22. Thus, Richter is only relied upon for those teachings that are relevant to dependent claim 8. Applicant's second argument was also unpersuasive, because the methods of Church are not limited to gels. Rather, gels are only an exemplary embodiment of the methods of Church, who also teaches flat surfaces upon which metallization can occur (see, for example, column 4, lines 25-30, where Church teaches the use of nylon or cellulose surfaces). Since Applicant's arguments were not persuasive, the rejection has been maintained.

Regarding the rejection of claims 11 and 13 under 35 U.S.C. 103(a) as being unpatentable over Church in view of Korlach, Applicant argues that Korlach does not remedy the deficiencies of Church with respect to independent claim 1, from which claims 11 and 13 depend (see pages 11-12).

This argument was not persuasive, because, as discussed above, Church teaches all of the elements of claims 1, 4-7, 9, 10, 14, 17, and 20-22. Thus, Korlach is only relied upon for those teachings that are relevant to dependent claims 11 and 13. Since Applicant's arguments were not persuasive, the rejection has been maintained.

Regarding the rejection of claim 12 under 35 U.S.C. 103(a) as being unpatentable over Church in view of Mian, Applicant first argues that Mian does not remedy the deficiencies of Church with respect to independent claim 1, from which claim 12 depends (see page 12). Applicant also argues that the rejection "fails to distinguish an electromagnetic field from a magnetic field, which is a significant distinction" (see page 13). Accordingly, Applicant argues, there is insufficient motivation to combine the teachings of Church and Mian to result in the method of claim 12 (see page 13).

Applicant's first argument was not persuasive, because, as discussed above, Church teaches all of the elements of claims 1, 4-7, 9, 10, 14, 17, and 20-22. Thus, Mian is only relied upon for those teachings that are relevant to dependent claim 12. Applicant's second argument was also unpersuasive, because claim 12 only requires that the amplification reaction is controlled by the application of an external magnetic force of any type. Since an electromagnetic field, such as that disclosed in Mian, is a specific type of externally applied magnetic force, the teachings of Mian regarding the advantages associated with magnetically controlled amplification reactions are within the scope of the method recited in claim 12. Since Applicant's arguments were not persuasive, the rejection has been maintained.

Continuation of 12. The information disclosure statement filed on March 22, 2010 fails to comply with 37 CFR 1.97(d) because it lacks a statement as specified in 37 CFR 1.97(e). It has been placed in the application file, but the information referred to therein has not been considered. As noted in MPEP 609.05(a), the date of any resubmission of any item of information contained in an information disclosure statement that fails to comply with the requirements of 37 CFR 1.97 and/or 1.98 is the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all requirements for statements under 37 CFR 1.97(e). As a result, the IDS filed on March 22, 2010 requires a statement under 37 CFR 1.97(e) in addition to the fee under 1.17(p). Since such a statement is not present, the IDS has not been considered.